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ABSTRACT

Information in this pamphlet will enable regular classroom teachers to plan for accepting visually impaired children into their classes. It specifically reviews elements of the planning process, appropriate goals for the child, roles of the regular teacher and resource teacher, and special materials and classroom strategies. Opening chapters define legal blindness, describe requirements of the Education for All Handicapped Children Act of 1975, and differentiate between general and specific goals for visually impaired children. Chapter three explains the different roles of the regular teacher, resource teacher, administrator, parents, and child in effectively implementing the special educational program. Chapter four summarizes availability of special equipment (braille writers, slate and stylus, optical aids, and long canes), special materials (braille readers and large print books), and support services (consultants and reader services). Chapter five gives specific suggestions for arranging the classroom and the visually impaired child's work area, and for orienting the new child to the classroom, hallways, cafeteria, bathrooms, and playground. Chapter six recommends strategies for successful grouping and peer relationships, written work, field trips, and use of audiovisual materials. It also gives tips on how to develop the child's organizational, communication, listening, and daily-living. (AV)

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Teaching the Visually Impaired Child in the Regular Classroom

SP 012 978

MAVIS Sourcebook 3

by
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Social Science Education Consortium, Inc.
Boulder, Colorado

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Sourcebook 1: *Who Is the Visually Impaired Child?*
Sourcebook 2: *Encouraging Successful Mainstreaming of the Visually Impaired Child*
Sourcebook 4: *Social Studies for the Visually Impaired Child*
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Project MAVIS
Materials Adaptations for Visually
Impaired Students in the
Social Studies

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1. Introduction

What would your reaction be to the news that a visually impaired child would soon be placed in your classroom? You would probably be apprehensive. You might think, "How is that child going to learn? How can I help that child to reach his/her potential? What are the resources available?" This would be a natural set of reactions and questions.

After working with the child, however, you would probably find that your apprehension was unnecessary, for the visually impaired child is not a child who is different from other children, but one who has a difference in his or her ability to see. The degree of this difference can vary greatly.

Perhaps you have heard the term "legally blind" and thought that all legally blind people have no usable vision. This is not true. Fewer than 20 percent of children termed legally blind need braille for reading and writing. Even some of these children have enough vision to aid them in travel. The other 80 percent of legally blind children have varying degrees of residual vision.

What, then, does legal blindness mean? A person described as legally blind may have 20/200 visual acuity or less in the better eye with correction or treatment, or may have a visual field restricted to 20 to 30 degrees. If a person was described as legally blind based on the first part of the definition, that person's best possible vision would enable him/her to see at 20 feet what the person with "normal" sight sees at 200 feet. The least vision would be no light perception at all. You can gain an understanding of the second part of the definition by making a pinhole in a piece of paper. Hold the paper close to one eye and look through the pinhole at a book. You can see three or four letters at a time—just as the person with a 20 to 30 degree field of vision can.

The term "legal blindness" thus encompasses a wide range of visual abilities. In addition, there is an even larger group of children than those termed legally blind who are regarded as visually impaired in most states. These are children with visual acuities of 20/70 to 20/200 who may require special educational services to reach their full learning potential.

Clearly, then, each visually impaired child will learn in a variety of ways, just as other children do. Each child will have different needs for special services and classroom adaptations. Your concern as the classroom teacher is can the child see or how well can the child see and how can you best help the child to learn?

The teacher providing the student with needed special educational services can help you begin to answer these questions. This person will generally be a consultant or itinerant or resource teacher who has been trained to teach visually impaired children. This resource teacher* will be a partner in working with you to establish a good program for the child. The teacher can provide information about the child's visual impairment and suggest strategies for dealing with the impairment.

It will be your own expertise in curriculum, classroom management, and learning theory, however, that will be most important in deciding how to teach the visually impaired child. Daily, you store in your mind information about individual children; you will also do this with the child who has a sight deficit. As you get to know the child, you will learn what his or her capabilities are and will expect the child to perform in proportion to those abilities. You will also make a mental note of what teaching techniques work best with the child. You will undoubtedly find that the good things you do for all the children will be equally effective with the visually impaired student. You may also find that such simple changes in your teaching habits as addressing students by name or touching the visually impaired child on the shoulder as you pass him or her so you will become more than a disembodied voice will be especially effective.

The most important factor in establishing a healthy learning atmosphere in your classroom, however, will be your attitude of positive acceptance of the visually impaired student. The role you assume will be emulated by your students. If you respect the visually impaired child as a student with a capacity for learning, the sighted students will regard their visually impaired classmate in the same way and that child will be able to accept him/herself in a positive manner as well.

The aim of this sourcebook is to arm you with basic information that will allow you to face the challenge of teaching a visually impaired child with confidence and acceptance rather than apprehension and doubt. This basic information includes understanding of the planning process for the visually impaired child's education, appropriate goals for the child, the roles you and the resource teacher will assume in meeting those goals, and special materials and classroom strategies which have proven to be effective with many visually impaired students. Combined with your own experience and expertise, this information will provide a sound knowledge base for beginning the task of teaching the visually impaired student in the regular classroom.

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*Throughout this sourcebook, specially trained teachers of the visually impaired will be referred to as "resource teachers," as they serve as a resource to classroom teachers regardless of their official designation.

2. Planning The Visually Impaired Child's Educational Program

Impact of P.L. 94-142 on Planning

Public Law 94-142—The Education for All Handicapped Children Act of 1975—was enacted by the Congress and signed into law in 1975. A number of this law's provisions directly affect the educational planning process for handicapped children. A brief discussion of the law and its major provisions will therefore be useful here.

This law may or may not have provided the impetus for placement of a visually impaired child in your classroom. In the late 1940's and early 1950's, parents became more aggressive in requesting that programs be provided locally for children with disabling conditions. Better information was available about disabling conditions and the notion that a disability was a stigma began to lessen. Legally blind children of school-entry age were placed in public schools in increasing numbers.

Because placement of visually impaired children in local schools—whether in self-contained classrooms, resource rooms, or regular classrooms—has varied from state to state and even from district to district, the impact of P.L. 94-142 on placement decisions has also varied. Even in areas where mainstreaming was an established practice, however, the law has had an impact on a variety of planning and service-provision procedures.

The following are the main requirements of P.L. 94-142 which must be adhered to by state and local education agencies:

—Assurance of extensive child identification procedures to locate, evaluate, and place disabled children.

—Assurance of "full service" goal and detailed timetable.

—Guarantee of complete due process procedures.

—Assurance of regular parent or guardian consultation.

—Maintenance of programs and procedures for comprehensive personnel development.

—Assurance of special education being provided to each disabled child in the "least restrictive" environment possible for that child.

—Assurance of nondiscriminatory testing and evaluation.

—Guarantee of policies and procedures to protect the confidentiality of data and information.

—Assurance of the maintenance of an Individualized Education Program for all disabled children.

—Assurance of an effective policy guaranteeing the right of all disabled children to a free appropriate public education at no cost to parents or guardian.*

Every state and local education agency must provide a written policy which complies with these stipulations in order to receive federal monies.

One provision of P.L. 94-142 which has caused some consternation among teachers is the requirement for an individualized educational program (IEP) for every disabled child. The law requires that the IEP be developed by a team including a representative of the public agency, such as the school principal, the child's teacher, the child's parents, and the child (when appropriate). The law also requires that the IEP include specific pieces of information, including a statement of annual goals and objectives for the child.

This requirement for goals and objectives seems to concern many teachers. But good teachers have always established group and individual goals. Working with the resource teacher, the parent, and the child (when feasible) should facilitate the setting of goals rather than make it more difficult, because these individuals can provide valuable input on special needs the visually impaired child may have.

Establishing Educational Goals for Visually Impaired Children

General Goals

General educational goals are naturally the same for children with visual impairments as they are for all children: to become independent enough to cope with most situations in which they find themselves and to realistically select a satisfying career in which they can perform commensurate with their abilities.

Sounds reasonable? Yet many sighted persons do not reach either goal, and the task has been even more difficult for the visually impaired person. This difficulty has been due in part to the fact that society would rather "take care" of certain individuals than find ways to help them cope by themselves. In addition, many parents find it almost impossible to allow the disabled child to learn to do things independently. Finally, certain stereotypes about jobs a person with a visual impairment could handle have been widely believed. Today, however, changes are slowly being made.

A number of factors are contributing to alterations in the stereotype of the "helpless" blind person: social changes which have resulted in

*Patricia Sawyer, ed., *Information Relating to Public Law 94-142* (Salem, Oregon: State Department of Education, Special Education and Special Schools Division, 1975).

recognition of the inherent worth of every individual; availability of better information about disabling conditions; assistance for parents who have a disabled child; demands by advocates among the disabled population and among educators that the disabled person be given equal opportunity; and finally, of course, laws to implement change.

The importance of independence to the visually impaired child in meeting the general education goals cannot be stressed too strongly. Independence begets positive self-concepts. Have you watched the face of a child who hurries to do something for mother? It's a happy face because the child knows mother will be appreciative when the task is completed. The same is true of a blind child who puts a jacket on independently for the first time. Success builds upon itself, and soon the child can dress him/herself completely.

In formulating general education goals for the visually impaired child, remember that expectations are important. Just as you set goals high for all your students, you should set standards for visually impaired children as high as can be maintained in accordance with their abilities.

Special Goals

In order for visually impaired children to meet the general goals discussed above, they must often gain particular skills which sighted children either do not need or learn easily—perhaps incidentally—through sight. These skills include daily living skills, communication skills, and orientation and mobility skills. All of these skills contribute to the student's ability to act independently in the sighted world. Although the primary responsibility for developing skills not included as part of the curriculum in the regular classroom will rest with the resource teacher and parents, it will be helpful for you to understand the importance of these special skills, since they can often be reinforced through regular classroom activities.

Effective living skills include such things as dressing, eating, using the bathroom, grooming, cooking, and managing personal finances. Because a child who was born blind or has limited residual vision cannot learn these skills simply by watching others, they must be specifically taught. The most basic skills should be taught by the parent or an early intervention teacher during the preschool years. The child who has no vision usually requires more time to learn these tasks because of their complexity and because parents may not know just how to teach the skills needed. Parents may also have guilt feelings about the disabling condition and may continue to help the child with a particular task long after the need for such help should have ended. An early intervention teacher can be a great help, but such teachers have been available in only a few states. Parents sometimes feel they do not need the services of such a teacher, even when one is available.

Children may therefore enter the school program with varied living skills competencies. Their current developmental level will determine what skills are included as goals on the IEP. Children who have had early intervention services will undoubtedly have been evaluated as to developmental levels; information from such evaluations should be available from the parents or early intervention teacher. As children advance in school, additional evaluations should be placed in their files. Because P.L. 94-142 requires evaluation of the child prior to placement, an evaluation must be performed if no information is in the child's file. The resource teacher can provide or arrange for this service if needed.

Orientation is the ability to orient oneself in space—to know where one is in relation to other persons and objects. Mobility is the skill of knowing how to get from one place to another safely and as easily as possible.

Since the late 1950's and early 1960's, blind persons have been receiving training in the use of the long cane for orientation and mobility. Children who have good orientation skills and who understand basic concepts of direction can begin to learn cane travel as early as junior high school. They must, of course, have sufficient judgment to use the cane for the purpose intended: to get from one place to another safely. Although children in elementary classrooms will most likely not be learning to use the cane yet, they will be learning basic orientation and mobility concepts and precane skills. The resource teacher can explain the skills and concepts being taught.*

Visually impaired students require the same oral communication skills as sighted students, as well as some special written communication skills. Oral communication involves two basic processes: conveying meaning to other persons and listening to others to derive meaning from their communications. Many visually impaired students seem to be highly skilled oral communicators. Your concern is whether such students really know and understand what they are talking about. These children's concepts are sometimes quite meager and even distorted because their verbal communications are not based on experience with the things being discussed. We found that one child thought "Home on the Range" meant the kitchen stove!

Listening skills are a vital part of oral communication. Research indicates that "the major percentage of children's classtime, and of adult communication time, is devoted to listening."** Because input through the visual channel is unavailable or limited to the visually impaired

*Some visually impaired persons do use dog guides for travel purposes. However, since dogs are usually only available to people age 16 or older, it is unlikely that your student will have a dog guide.

**Sister Jean Marie Rathgaber, *Experimental Listening Curriculum*, Final Report, Project No. 6-8477, U.S. Department of Health, Education, and Welfare, Office of Education, Bureau of Research (Blauvelt, New York: Dominican College of Blauvelt, 1969).

youngster, listening skills become even more important. The visually impaired child in your class may have well-developed listening skills, but this will not necessarily be the case. If it is not, you may want to include listening skill development as a part of your program for all the students.

In addition to these oral communication skills, the visually impaired student will need to learn some special written communication skills. They may include reading braille, writing braille with a braille writer and a slate and stylus, using a low vision aid, typing, and writing to the maximum degree possible given the vision condition. (Even the totally blind student needs to be able to write a signature.) Again, even though these skills will be taught by the resource teacher, it will be useful for you to know what skills are included in the child's goals for the year.

3. Defining Roles for Implementing the Educational Program

The most effective implementation of the visually impaired child's educational program and the best use of your time and the resource teacher's time can be achieved by careful and frequent planning sessions which include both teachers, the parents, and the child. If you can determine early the role of each individual, frustration for all concerned should be reduced, and a mutually cooperative and constructive relationship can be promoted. Naturally, the child will benefit.

The Regular Classroom Teacher

If you can be comfortable doing those things you do best and letting the resource teacher do what she or he is trained for, a very positive experience should occur. The classroom teacher is the expert in subject areas at a given grade level, classroom management, and group interaction. The resource teacher will know the needs related to visual impairment, techniques for compensating, and where to obtain materials. Ideas and needs can be exchanged through the use of a single notebook. Early in the year you may need a weekly conference with the resource teacher; then with use of the notebook, a conference every 3 or 4 weeks should be sufficient.

The Resource Teacher

The resource teacher supports you best by teaching the child those skills needed for coping in a sighted environment—the communication, daily living, and orientation and mobility* skills discussed earlier—and by providing the special materials you may need to teach the child in the classroom. The resource teacher can also provide advice on adapting classroom activities and materials for use with the visually impaired student. The resource teacher will also provide assistance in evaluating the student's progress throughout the year. The resource teacher should *not* spend time tutoring the visually impaired student in a subject area. If such tutoring is needed, a schoolmate from an upper grade, a classmate, an aide, or a volunteer should be sought for this role.

*A special orientation and mobility instructor may be available, or the resource teacher may be certified as an instructor of orientation and mobility.

Determining how much time the visually impaired student should spend with the resource teacher is truly a dilemma. On the one hand, the child should have as much time as possible in the regular classroom to profit from the dynamics at play there and participate in as much of the regular curriculum as possible. Yet the student must also learn the special skills not taught in the regular classroom.

Generally, the child who is learning braille skills will need more time with the resource teacher in the primary grades when the braille system and special equipment are new. By junior and senior high school, dependence on the resource teacher should be decreasing. An exception to this statement would be the young person who loses vision after the primary grades. This student would naturally need time to learn the special skills mentioned above.

The child with residual vision will ordinarily need much less help from the resource teacher than the totally blind child. The amount will vary depending on the student's level of vision and ability to use it The children who probably need the most help and very probably the ones least likely to want it are those children whose vision is deteriorating rapidly without hope of medical remediation. Materials, equipment, reader service, and/or counseling may be needed.

All of these factors must be considered when scheduling the amount of time which the visually impaired student will spend with the resource teacher.

The Administrator

The administrator will generally participate in making the placement decision for the visually impaired child, but may have little direct contact with the child after that. Administrators may be supportive of the mainstreaming effort, but they sometimes need to be convinced that visually impaired children don't need as much help as they might have thought. When I took a child to a kindergarten, the principal asked me to stay with the child and show her the room while the principal talked to the mother. When they returned, I was standing in the doorway of the classroom while the child delightedly explored all the fascinating things in the room. The principal was a wise lady; she simply said, "Donna doesn't need any help, does she!"

You will find it useful to keep the administrator up-to-date on the visually impaired child's progress. You will also find that the administrator can be helpful in gaining information about possible services available to the visually impaired student. For example, most states pay for reader service for reading material not available to the child. If the resource teacher does not already have access to such service, you might ask the principal to investigate the possibility.

The Parents

P.L. 94-142 mandates that the visually impaired child's parents or guardians be included in planning and evaluating the child's program. Even if this mandate did not exist, however, cooperation of the parents would be vital.

If the parents of the visually impaired child have allowed and encouraged the child to function independently, your task will be easier because the child will undoubtedly want to learn to do things for him/herself. Otherwise you may find the child waiting to be waited on! Unfortunately, we often fall into the trap of thinking, "Poor kid, he can't do it," and we do it for him. Once again we rob the child of the right to become independent and to develop a better self-concept.

Often when a child learns to do something new, the parents are also encouraged and will begin to expect more. If you can convey to the parents the understanding that you genuinely want what is best for their child, a good working relationship can generally be established and maintained.

The Students

Both the visually impaired student and sighted classmates play important, although perhaps unconscious, roles in implementing the visually impaired student's educational program. It is important that the visually impaired student share equally in such classroom responsibilities as opening and closing windows, cleaning the chalkboard, and watering plants. A shoddy performance is no more acceptable from a visually impaired child than from any other child. It may take the visually impaired child longer to learn how to do a task well: expecting less does that child a disservice. Although positive feedback is enjoyed by all, praise can be overdone and should be tempered to fit the situation. If the visually impaired student does not participate equally in classroom responsibilities and receive the same rewards, it is unlikely that he or she will ever function as a full class member in other areas either.

As a classroom teacher, you are well aware of the importance of the peer group. One of the most important things any child learns at school is how to cope in a variety of situations. Peers make essential contributions to growth in coping skills. Visually impaired students who have been overprotected may need a lot of encouragement to try new experiences. Knowing that their sighted friends have tried and enjoyed the experiences will be an important form of encouragement. On the other hand, peers may sometimes be harsh; this, too, may be the very thing a given child needs at a particular time. Children who have visual impairments need to learn how to handle failure as well as success.

Problems with peer group relationships often affect students' self-concepts. Role-playing, group discussions, and counseling may be ways of helping all students resolve these problems.

4. Obtaining Special Materials, Equipment, and Support Services

Special Materials

The number and kinds of special materials you will need will depend on the grade level you are teaching and the amount of usable vision the visually impaired student in your class has.

The kindergarten child will probably need very few specialized materials. Children at this level are learning to differentiate, to listen, to follow directions, to sequence—all those things that ready them for academic pursuits and healthy interaction with others. The visually impaired child can generally learn these things using the same materials as sighted students, although you may want to have a greater-than-usual variety of materials available for discriminating and sorting: things of different shapes, sizes, textures, sounds, weights, lengths, colors, etc. The child with a visual impairment may need additional hands-on experiences, as well as related language experiences—telling stories, acting out stories, labeling familiar objects. More experiences of these kinds will be good for all the children.

Records and tapes may be useful for teaching sound discrimination. You or the school librarian may have records that teach ordinary sounds. You can also make a tape at home with familiar "house sounds" on it. All the children should enjoy identifying these sounds. Records that have directions for such activities as running, hopping, jumping, and bouncing are fun for all younger children.

As teachers begin to use more print materials with students, the need for special materials increases. Braille is no doubt the mode of reading first thought of in relation to blind persons. In the 1950's, when primary-age visually impaired children were first mainstreamed into public school classrooms, braille materials were hard to obtain. Braille materials are now much easier to obtain, and younger children, at least, generally have what they need. Language arts texts, supplementary materials, and social studies texts have been easiest to obtain because they are transcribed from print into grade two or literary braille. (Grade two or literary braille contains the alphabet, the numerals, punctuation, and 189 contractions.) Science, mathematics, foreign language, and music texts have been

harder to obtain because they require greater skill to braille. Each requires learning a different set of symbols. Charts, graphs, and maps in math and social studies pose additional problems.

The resource teacher or state department should be able to provide books and materials for your student if given plenty of lead time. Generally, the resource teacher starts as early as January trying to find out what books are going to be needed for the next year. Multiple selections in many districts pose a real problem. The resource teacher will check various sources of braille materials. If the needed materials are not available from any of these sources, the teacher will try to arrange to have the book brailled. Brailling an entire book requires 3 months' notice. A few programs are providing paid braillists to do the books that are not readily available, and many programs have wonderful volunteers, but they need time to transcribe new materials.

If you want a test, special worksheet, or poem brailled, the resource teacher can do this, but a few days' notice will still be needed. Note that a good braillist can do six pages of braille in an hour; that's equivalent to two pages of print!

If maps, charts, and graphs are not included in the braille books provided to you, ask the resource teacher about supplementary maps available from various sources or methods of making tactile maps. MAVIS Sourcebook 4* provides additional information about making and adapting tactile maps.

You will notice that braille books and worksheets are both larger and longer than their print counterparts. Braille is bulky because the paper is thicker and braille letters require more space than print letters. Storage may be a problem (see Section 5).

If the visually impaired student in your class is just learning to read braille, some additional materials may be helpful in reinforcing reading skills. The furniture and equipment in the room (desks, chairs, tables, sink, door, chalkboard, etc.) can be labeled in braille and print. Flash cards in braille and print can be prepared so that the visually impaired child can work with another child on the vocabulary which is being developed in the regular reading class. Arrange with the resource teacher to have these materials available when needed.

Some hands-on materials to enhance reading lessons may also be helpful. One classroom teacher had the children make life-sized stuffed paper dolls representing characters from their first book. These dolls were attached to the chalkboard and used to reinforce the reading lesson for several weeks.

Once the visually impaired child has learned to read braille, oral reading will generally be as fast when using braille as when using print.

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*Laurel R. Singleton, *Social Studies for the Visually Impaired Child,* MAVIS Sourcebook 4 (Boulder, Colorado: Social Science Education Consortium, Inc., 1979).

Silent reading using braille is slower, however, averaging about 100 words per minute.

One final item which will be useful to you if your student uses braille is a three-page sheet showing the braille letters, numerals, and contractions. The resource teacher may have copies, or you can order a copy directly from the American Printing House for the Blind (1839 Frankfort Avenue, Louisville, Kentucky 40206). The cost is twenty cents (20¢).

For the student with partial vision who does not need braille, one usually thinks of large type books. Such books are generally printed in 18-point type and are larger than their regular print counterparts. If a child needs them, then of course they should be available. But too often, students are given large type material when they should be learning to use their vision more effectively with regular size print. Children can hold printed material as close to their noses as possible and read without damage. It's much easier to hold a regular print book than a large type book.

In the primary grades the print in books and on charts is large, and children with visual impairments can use the same books as the other children. They will prefer to have the books with pictures just like the other children have.

In third and fourth grade, print in books is generally smaller. The words and sentences may also be closer together. As important as size of type are good contrast between black and white and good spacing between words and sentences. At this grade level, some students may begin to use magnifiers. Many ophthalmologists, in fact, suggest that preschool children with limited vision be given inexpensive magnifying glasses at home. By the time they come to school they will be accustomed to using the magnifiers for fun and will feel no reluctance in using them for reading.

As a general rule at any grade level, try regular print first. Children with quite limited vision can generally use it. Ask the resource teacher to obtain large type copies only if necessary.

Because both braille reading and print reading with residual vision are slower than reading print with "normal" sight, visually impaired children often need auditory supplements to their text material. A student can often listen to a selection two or three times in the same amount of time required to read the selection once. Recorded copies of many texts are available on talking books (records) or tapes (either cassettes or reel-to-reel). Ask the resource teacher to look into the possibility of obtaining such recorded material. It will be particularly useful for lengthy reading assignments.

Special Equipment

Many visually impaired students use special equipment. Such equipment is furnished the child, generally from federal funds that are channeled through the state. The resource teacher will supply most of this

equipment as a matter of course, but it may be helpful for you to be familiar with some of the types of equipment that are available.

For writing, the student who uses braille will undoubtedly use a braille writer—a typewriter-like device that produces braille. It will be helpful for you to know how to put paper in the braille writer, as it can be quite temperamental and cause frustration for younger children.

The student who uses braille may also use a slate and stylus for writing. This is a pocket-sized device for producing braille manually. Because of its compactness, the slate and stylus is often used for note-taking, but it is unsuitable for long writing assignments because it is quite slow to use. Since use of the slate and stylus requires excellent coordination and small muscle use, primary grade children are seldom taught to use it.

Another piece of equipment often used with braille students is the raised-line drawing kit, which contains a rubber-covered clipboard, polyester drawing sheets, and a marking instrument. When the marking instrument is used on the polyester sheets attached to the clipboard, a raised image is created. This kit can be used to teach writing to the blind child (for signatures, etc.) and to create tactile graphs and charts.

Many visually impaired students, whether they use print or braille for reading, learn to use a typewriter for assignments at a relatively early age—perhaps in the fourth grade.

Various types of aids are also used for reading. These include a variety of optical aids such as magnifiers and telescopes. The resource teacher can explain the one(s) most suitable for the visually impaired student in your class and give you instructions on how the student should be using the device in class.

Tape recorders and record players are also common "reading" devices.

Less common are newer, and more expensive, devices to aid visually impaired persons in reading. One of these devices is the closed circuit television, which enlarges print electronically onto a small television screen which provides good contrast and a clear image.

Another device is the optacon. This device reads print and translates the letters into tactile displays. Since one letter is read at a time, reading with the optacon is slow: 30 to 50 words per minute at best. However, use of the optacon does offer visually impaired persons access to print material that is not available in braille. A synthetic speech component being developed for the optacon will give the device more flexibility.

A third reading device is the Kurzweil reader, which translates the printed word into intelligible speech at the rate of 150 words per minute. This device also offers access to current materials not available in braille.

Check with the resource teacher to determine whether any of these newer devices are available to your student and, if so, how they can be used in class.

Other aids which the visually impaired child may use include mobility devices such as the long cane; mathematical devices such as an abacus or talking calculator; and measuring devices such as braille or large type rulers. The resource teacher can explain the use of these aids to you.

More detailed information about the devices mentioned here and other pieces of special equipment which may be useful is provided in MAVIS Sourcebook 6.*

The child should, as soon as possible, learn to take care of special material and equipment and see that they are properly and safely stored at the end of the day. The resource teacher should teach the child the value and care of the special equipment.

As the child gains skills, he or she will need to carry equipment home at times. When equipment is returned to school, it should be replaced in its designated place. (Note that the family or a service organization may duplicate some pieces of equipment for home and future use.)

Educational Support Services

Although the primary support available to you will be the resource teacher, there are other sources of consultative services, which you may at times want to contact directly. Within your own school district, for example, there may be prevocational teachers, evaluators, preschool parent trainers, and media specialists who can provide valuable consultative services. There may also be a day school for visually impaired children which you could visit for a day.

Another excellent resource is the state school for the visually impaired. A visit to the school would be beneficial, as would discussions with teachers at the school, who are familiar with a variety of successful teaching techniques. The school may have materials which they are willing to loan to public schools and may have staff members who go into public schools as consultants.

Such state agencies as the Department of Rehabilitation may have services and materials you would find helpful. Although Departments of Rehabilitation are generally most interested in working with you to determine prevocational and vocational skills, they may also be able to provide information about national agencies, laws regarding services to blind persons, and counseling services for parents. Some state agencies have summer evaluation programs or summer camps available for young persons.

Reader service monies are usually available from the state agency for the blind or through special services in the state department of education. A classmate who is a good reader might be paid from these funds to read some assignments to the visually impaired child. Although parents and

*Laurel R. Singleton and Madge Leslie, *Resources for Teaching Social Studies in the Mainstreamed Classroom*, MAVIS Sourcebook 6 (Boulder, Colorado: Social Science Education Consortium, Inc., 1979).

volunteers are sometimes used as readers, paid readers seem to be more satisfactory. The visually impaired child is more independent and does not need to be given what might seem to be special favors. It would thus be worthwhile to investigate the availability of reader services if they are not already being provided.

The university in or near your city may have a teacher education program for teachers of visually impaired children. If so, this program may have courses you would find helpful, students who need practicum experience, or students who would be interested in volunteering a few hours a week in your classroom.

There are also a number of national organizations which provide services to the visually impaired or professionals serving the visually impaired. These include the previously mentioned American Printing House for the Blind, The American Foundation for the Blind (15 West 16th Street, New York, New York 10011), the Library of Congress (National Library for the Blind and Physically Handicapped, Washington, D.C. 20542), the National Society for the Prevention of Blindness, Inc. (79 Madison Avenue, New York, New York 10016), and many others. Information about these and other organizations is provided in MAVIS Sourcebook 6.

5. Establishing the Classroom Environment

Arranging the Classroom

The amount of change needed in your usual classroom arrangement will depend on the visually impaired student's vision problem. Students who use braille will need more classroom space than sighted students. A desk or table approximately twice as long as an ordinary desk will be needed to accommodate special materials and equipment: large braille books, a braille writer, and a typewriter. The special education program will furnish these materials and should provide a specially made bookcase to hold them. Don't hesitate to ask for items such as a bookcase if you need them.

Often the child's desk and bookcase are arranged in an "L", with the child seated on the inside for easy access to both desk and shelves. The top of the bookcase is thus part of the work space.

If you have flexible seating, the blind child's seating should be changed too, as long as the child helps make the change or is told what changes are being made. After all, no one likes to have furniture the same way all the time!

The student with residual vision will require less additional space than the student who uses braille, although some storage space for oversize large print books, a tape recorder, or a typewriter may be needed. The child's desk will need to be near an electrical outlet if a lamp is used for close work.

One concern for the child with residual vision is proper placement in the classroom. Proper lighting and avoidance of glare are important for all children, but especially so for visually impaired children with residual vision. The resource teacher can provide advice on the most appropriate placement, or you may want to observe the child in the classroom before making a decision. Observing where such students like to sit, how they manage glare, and what tasks they seem able to do from given positions will help you make your decision. If a placement that will provide adequate light without glare cannot be found, a sheet of nonglare paper can be taped to the student's work surface.

Some visually impaired children feel perfectly comfortable with their desks right by the chalkboard wall. If this arrangement is acceptable to

the child and provides sufficient light, it may be quite useful, since the child will probably be able to copy from the chalkboard at that distance. Try to see that the child is not isolated from the rest of the class.

Remember that hearing is vital to the visually impaired student; be sure the student is seated for good auditory reception.

If the resource teacher works with the child on a regular basis, a study room will be needed. There may be times when they can work together in the classroom, but for special skill development, they will need some time in a separate room. Many of the special books and much special equipment can be stored in the study room.

Orienting the Visually Impaired Child to the Classroom Environment

As a classroom teacher, you do not need to be terribly concerned about safety. Totally blind children are usually naturally cautious in a new place. When they do begin to move about freely, they should have no more accidents than other children. The orientation and mobility instructor or the resource teacher has probably taught the child to hold one arm and hand across the body and face (not touching the face) with the palm outward to protect the head when stooping to pick up something.

One classroom danger is the half-open door. I've seen many black eyes from that source. All students should be cautioned to keep doors shut or completely open.

Feel free to ask the resource teacher or the orientation and mobility instructor for assistance in orienting the visually impaired child to the classroom and school. One useful approach is to have the child come to school before classes start to explore the room when there is no noise. If this is not possible, perhaps exploration could be done after school the first few days. Some children will move about entirely on their own; others will need to be encouraged to explore. Within a few days, most should be moving about freely in the classroom.

If a child is hesitant, walk around the room with him or her, preferably when no one else is there. Explain where a few important stationary items are: the door, windows, sink, closet, chalkboard, and the child's storage area. Do this several times, always starting at the same place. Watch to see if the child reaches out to find things; encourage such behavior. Introduce the child to additional objects as he or she becomes oriented so he or she will learn quickly to locate needed materials and move around independently.

Children who are totally blind may need to have the parameters of their working space clearly defined. Otherwise, they may push a classmate's materials onto the floor.

If the student is new to your school, the bathroom, cafeteria, gym, and doors by which he or she enters and leaves the building should all be

located as soon as possible so the student can learn to reach all these places independently. As the child moves into the hall, you may need to issue warnings about objects that stick out from the walls: a cased fire hose, hot pipes, etc. As you go into the halls, have the child place one hand on your arm or hold your arm just above the elbow. If this position is used, the child need not be warned even when going down steps because he or she will feel the lowering of your body. For safety and ease of travel, the visually impaired child should follow about one-half step behind the guide. The visually impaired child should *never* be pulled or pushed.

Some orientation to the bathroom, cafeteria, and playground may be needed. If the child is attending school for the first time, he or she may be unfamiliar with public restrooms. You may therefore need to show the child manually where urinals, toilets, sinks, towels, and wastebaskets are.

In the cafeteria, the visually impaired child may need to be shown through the line several times in order to locate tools, etc. Because the general noise in a cafeteria makes it difficult for the blind person to remain oriented, it may be best for a classmate or adult to carry the child's tray to the table at the beginning of the year. As the child becomes better oriented, however, he or she should be able to carry a tray and locate a table at the same time.

It is hoped that the child will be acquainted with playground equipment. If not, some encouragement to use the various pieces of apparatus may be needed. Children may also need to be cautioned about flying swings. Children with residual vision may need more watching than blind children.

Whenever the visually impaired child is exploring a new environment, encourage the use of sound clues: the sound of the air conditioning system, car noises from outside, wind from the hall, the ticking of the clock, or the hissing of steam from a radiator. Use of sound clues is imperative in achieving good orientation and mobility skills.

6. Guidelines For Effective Teaching

Day-to-Day Classroom Procedures

The visually impaired child will be able to participate meaningfully in most, if not all, activities in the regular classroom. Some adaptation to enhance participation and integration may be needed, however, particularly in the areas discussed in the following subsections.

Grouping and Peer Relationships

The key to having a successful year with the visually impaired child is to establish a classroom environment in which all the children accept one another and work willingly together. The stage for acceptance is set by the classroom teacher, who recognizes each child's need for help and ability to contribute. Children, too, are often very sensitive to the delicate balance between need for help and contribution to the group. Recognition of their own ability to contribute is important to self-esteem.

Sometimes other children who have special needs are overly solicitous of the child with a visual disability. After they have had an opportunity to be helpful, they may need to be told to "let Mac do it himself" when it is appropriate. The overly helpful child may have to be reminded several times and be given opportunities to do more constructive tasks. The visually impaired child may need to learn how to ask for help when needed and refuse it when it is not necessary.

As a classroom teacher, you are well aware of the child who demands a disproportionate share of your time. Since such demands often cause other children to become resentful, take care not to give the visually impaired child too much help. Open discussion of different kinds of help may be useful. Some children may need considerable help to understand special needs. Role playing is one way to work out feelings that may arise.

The teacher will maintain balance between special needs and special treatment. For example, a child or the teacher may bring a rabbit or puppy into the room. Each child should have an opportunity to hold the animal. The child who is visually impaired should take a turn like everyone else and should never be the only one to have such a special experience. Think how much each child will learn from holding and smelling a real live wiggily animal! Learning through the senses of touch and smell is an experience the sighted child should have more often.

Some special equipment, such as a ball with a bell or beeper in it, should be shared. Tapes made for the visually impaired child for study purposes may be shared by a group or by all the children when appropriate. Encourage the child with visual impairment to share special material/equipment whenever possible.

When partners are needed, whether for safety's sake (as in the case of a fire drill) or to adhere to the rules of a game, children should be allowed to choose their partners. Sighted children should not be made to feel they are burdened, and the visually impaired child should not feel like a burden.

Written Work

For written assignments, let the child with residual vision try various colored pencils or felt-tip markers to see what he or she prefers. Some children need high contrast, while others prefer less, depending on the vision problem. Bold-line, nonglare paper should be available through the resource teacher if needed.

The visually impaired child who uses braille will, of course, braille written assignments. The resource teacher will interline the braille materials in script as the child has written them so that you can evaluate the work as you do the papers of other children.

When the child learns to type, written assignments can be typed. Of course, the totally blind child will not be able to proofread typed material.

If the chalkboard is used to present information to the class in written form, it should be kept clean. Good contrast is generally necessary to prevent undue fatigue. Black on white or white on black are the best color combinations for chalkboard work. The chalkboard should definitely be nonglare.

If you follow these cautions and read what you are writing on the board aloud, some visually impaired children can take their own notes. Others may need to have a classmate with clear, legible handwriting make them a copy. As an alternative, you might give the student your copy of the notes or make a second copy as you prepare for the lesson. Very important information placed on the board might be prepared on tape or in braille by the resource teacher.

As an alternative to using the board, some visually impaired children can see work done with the overhead projector. Let the child in your class experiment with the projector to see if this is a workable option.

Written tests are an important part of most classrooms. If the child uses braille, try to get the test to the resource teacher a few days ahead of time so that a copy can be ready for the student. This is the most equitable option for handling tests. If it is not possible for the test to be prepared in braille, you, a classmate, or a student from an upper grade could read the test to the visually impaired child. This option is less reliable, however, and should not be used for important tests if at all possible.

In preparing tests and worksheets, avoid giving dittoed material to the visually impaired student. That is hard to do, isn't it? If you can get black and white copies with good contrast, fine. But purple dittoes are often smeared or pale. If it is necessary to use purple dittoed material, you might give the visually impaired child the original copy from which you made the dittomaster, or the child can place a yellow acetate sheet over the dittoed material. This technique generally improves readability.

Audiovisual Materials

Audiovisual materials can often be used successfully with visually impaired children. If films are not just pictures but have a good narration and are preceded and followed by class discussion, the visually impaired child will gain from this medium. Films or filmstrips with little or no narration can be supplemented with brief comments from a classmate or teacher at the points where such things as changes of scene, additions of characters, or shifts in plot occur.

Most children with residual vision will need to sit as close to the screen as is possible without blocking the view of others. A few children may have somewhat different requirements. Check with the resource teacher or let the child experiment with different seating arrangements.

Small filmstrip viewers can be used by children with some sight. These viewers can be pulled right up to the child's face if necessary.

Television can also be used by visually impaired children, especially if the narration or dialogue is adequate for understanding. If equipment is available to you, educational television programs can be taped and rerun for further study.

Models

Models of animals, people, and objects can be helpful to visually impaired students, but they can also be misleading if the children have no point of reference. For example, students may be able to make contact with several dogs and so realize that dogs come in many sizes with different kinds of hair, but also have common characteristics. They may never see a giraffe and will likely never touch a rhinoceros; models can be used for these animals. However, unless models of these animals are compared with scaled models of dogs, students may conclude that giraffes and rhinoceroses are smaller than dogs!

Models should be used sparingly. The real thing is to be preferred if at all feasible. When models are used, they should be as realistic as possible. Sometimes stuffed animals, birds, and snakes are available on loan from museums.

Field Trips

No doubt field trips are part of your overall curriculum and you prepare the students for field trips as you do for any new learning experience.

By calling the field trip site in advance and explaining that your class includes a child with a visual impairment, you may be able to obtain a richer experience for all the children. In most places children are taken for field trips, there are items which can be handled. Sometimes study of a few well-chosen items makes an excursion more meaningful for all the children than rushing through a place trying to see everything.

If things cannot be touched at the field trip site, there may be identifiable sounds and odors. After a group of nursery school children had been to the zoo and were excitedly talking about what they had seen, the two blind children in the group added several things. They could remember where some of the animals lived in relationship to one another and many of the noises made by various animals, as well as the richness of the odors.

When an adult accompanies a visually impaired child on a trip, the adult should be cautioned not to overdo the verbalization. See first what the child observes. Sounds and odors may need to be identified, but too much explanation can be stultifying.

When you return to the classroom, give students an opportunity to discuss what they observed. Remember that children sometimes think we want them to answer a question in a particular way. When asked what he had seen on a class boat trip, one visually impaired boy responded that he had seen the flag flying, the captain's bridge, and the big black pipes. But when his teacher laughed and asked what he really saw, he told of the steep metal ladder he had climbed, the tilt of the gangplank, the motion of the ship, and the smell of tar. All these things were much more meaningful to him than the answer he thought he should give. Although the visually impaired child's contribution to the discussion may be different, it is no less worthwhile.

Activities to Meet Special Needs of the Visually Impaired Child

Organizational Skills

The child with a visual impairment needs to learn every way possible to save time and energy. One effective way of doing this is to develop good organizational skills. The child needs to know where to locate books and materials easily. You might suggest that the books used every day be placed on the top shelf of the bookcase, equipment on the middle shelf, and reference books on the bottom shelf. There is nothing special about this particular arrangement; the idea is that the materials should be arranged in a logical, easily remembered way.

Encourage the child to return materials and equipment to their proper places as soon as he or she is finished using them.

Notes, tests, and other class papers should also be kept in an orderly manner. Dating each paper is useful, as is keeping papers in a loose-leaf notebook according to subject area. Dividers in the notebook should be labeled in the appropriate medium.

Communication and Listening Skills

Communication and listening skills can be developed through a wide variety of regular classroom activities. Communication skills can be developed by telling stories, learning to sequence segments of stories told by others, taking and giving directions, role playing, participating in music, art, and drama activities, writing papers, working on research projects in small groups, working in a learning center, using the telephone, learning to use the library, etc. If you note that the visually impaired child's typing, writing, or other communication skills are not commensurate with his or her abilities, you and the resource teacher may want to develop some special activities to improve these skills.

Listening games are beneficial and fun for all children, not just those who especially need them. Try some of these:

—Blindfold the children and see how many sounds from the environment each child can write down at the end of a minute.

—Have the blindfolded children form a large circle. Call the names of two children on opposite sides of the circle and see who can find an object dropped inside the circle first. Eliminate the loser each time until one child remains.

—Again blindfold the children and see who can identify sounds made by the teacher or other children. As skills improve, have children identify not only what each sound is, but where it is coming from and whether the source is moving or stationary. The ability to answer such questions is of tremendous importance to the blind person because it is directly related to orientation and mobility.

—Whisper a sentence and have each child repeat it in a whisper to the next child in line. This is an old, but still effective, listening game.

—Let the children read short stories aloud and see who can retell the story. Increase the length of the stories as the children gain skill.

—Give a command and see if the children can follow it correctly. Increase the complexity of the commands as skills develop.

If you have ever tried to used taped material for study purposes, you are probably aware that it is not an easy job. The child who is being introduced to the use of taped materials needs some guidelines. What is he or she looking for? If there are questions at the end of the story or chapter, they might be read first to organize the listening activity. If not, specific questions or instructions for the use of any given material should be introduced before the student uses the tape. Ask the resource teacher for help with this skill.

Daily Living Skills

Although teaching daily living skills will be the responsibility of the parents and the resource teacher, you will have opportunities to help the child as well. It will thus be helpful for you to understand what some of the skills are and how they can be developed. Let's consider eating skills as an example.

If visually impaired children are given the opportunity, they can use spoons, forks, and knives just as other children do. They may need more time to practice, and parents may need to be encouraged to let the child try. Dipping a spoon into a bowl of soup or soft pudding is a pretty complicated task. Try it blindfolded. How do you know the bowl of the spoon is up and that you are moving it upright to your mouth? Fingers sometimes have to check until the change in the weight of the spoon can be discerned.

Try to get peas or chopped up lettuce on your fork while blindfolded. It's almost impossible! So you don't eat peas? Of course you do, but you may have to mash them or check the fork with your fingers.

It is helpful to tell a visually impaired child where things are on the plate: carrots on the left, meat on the right, a peach half at the top. Again, the child can learn to unobtrusively check the plate with his or her fingers.

If you use the English way of handling fork and knife, you might demonstrate the method for the visually impaired child. This method is less awkward than ours.

Milk cartons and cans with tabs can be a problem. Show the child how to hold the carton or can firmly on the table with one hand and open it with the other. A bag of potato chips should also be stabilized on a firm surface to prevent the chips from scattering if the bag opens suddenly.

Note that many of the eating skills must be physically demonstrated. Since you will probably be more accessible to the child during the lunch period than the resource teacher, you will be able to assist in this area if needed. Talk to the resource teacher about other ways in which you can help with daily living skills.

Remember to encourage the child whenever he or she tries a difficult task, and be sure to allow plenty of time for completion. Enlist the cooperation of the child's parents, who should be your greatest allies in helping the child develop independence. Colleagues and principals may be as hard to deal with as aunts, uncles, and grandparents in this area. It takes a great deal of firmness and patience as well as real caring about the child's ultimate self-respect to keep the well-meaning adults in the school environment from helping too much.

7. Conclusion

As you gain experience teaching a visually impaired child, any apprehension you may have had will inevitably fade. Your concerns will once again focus on the important experiences you want all the children to have. The visually impaired child will be considered in your planning just as is every other child. There will be something special to know about each child and a recognition that all have many similar needs. Many things that might seem to be a problem will not be.

It has happened over and over again that at the end of the year, the classroom teacher has said, "This was the greatest year I've ever had. My teaching has improved. I have become more specific. I can give better directions and provide better descriptions. There is an added dimension to my teaching."

Let it be an exciting experience for you.